

Statement re Latchman Laboratory

As a world leading university, UCL is committed to maintaining and safeguarding the highest standards of integrity in all areas of research.

We take any allegations of research improbity very seriously and have rigorous systems in place to ensure that all allegations are investigated thoroughly and that they are constantly reviewed to ensure the highest standards are met.

UCL has considered allegations of research misconduct relating to the Master of Birkbeck, Professor David Latchman, and other individuals in relation to the laboratory he ran at what is now the UCL Great Ormond Street Institute of Child Health. At the time of the receipt of the allegations, he held a 0.1 FTE appointment at UCL alongside his position at Birkbeck. All internal procedures relating to these allegations have now concluded.

UCL is now in a position to respond to FOI requests that have been received relating to investigations carried out into the allegations. Following guidance sought from the ICO, the investigation reports that are being released have been redacted to remove the personal data of some individuals involved in the investigations - reflecting the need to balance the public interest in being transparent under freedom of information law with the personal data rights of individuals.

These reports concluded that manipulation of research data had occurred in many research papers during the period of Professor Latchman's time as head of the unit. Several actions were taken responding to recommendations in these reports including:

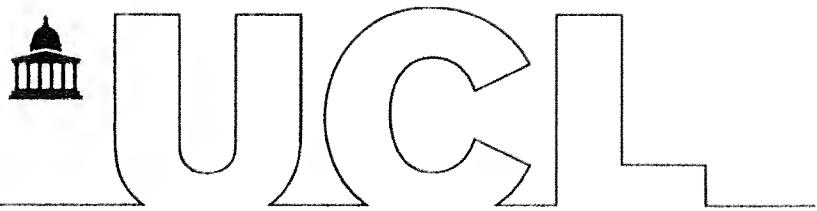
1. A formal disciplinary process was initiated against a member of Professor Latchman's research group. The individual resigned and left UCL before these proceedings could be completed.
2. Two separate disciplinary processes into Professor Latchman found that there was no deliberate intention to commit misconduct in research and, therefore, there were insufficient grounds for dismissal.
3. Authors and editors of the relevant papers, including Professor Latchman, were directed to correct the record of research where research misconduct was identified - resulting in retractions and clarifications in the relevant journals.

Professor Latchman ceased to supervise research.

Going forwards, UCL intends to promote greater transparency by publicly publishing more detailed appropriate summaries of research misconduct investigations and is reviewing its procedure for investigating allegations of research misconduct.

We are aware of calls from the research community for total transparency and for the publication of research misconduct reports in full. UCL is supportive of this approach and will be working closely with Government, regulators and key bodies such as UK Research and Innovation, UK Research Integrity Office and the League of European Research Universities to ensure that it is doing all that it can to meet the demands of transparency in this area of significant public interest.

UCL would welcome greater guidance in this area from relevant bodies on how to effectively balance public interest requirements and data subject rights under privacy laws.



**Allegation of research misconduct against
Professor David Latchman and**

Report of the Screening Panel

Background

- 1 Following receipt of an allegation of research misconduct and undertaking the initial assessment required under the UCL procedure for investigating and resolving allegations of misconduct in academic research ('the procedure' hereinafter), the UCL Registrar the Named Person for the procedure, determined that a Screening Panel should be convened to consider the allegation in question.
- 2 The allegation of research misconduct related to an allegation of fraud in relation to fabrication of data that had been sent anonymously from the e-mail address ('the Complainant') and was made against Professor David Latchman CBE, Master of Birkbeck, who also held a 0.1 FTE appointment at UCL Institute of Child Health (ICH), and ('the Respondents'). The alleged fraud related to 28 articles that had been produced by the Latchman Research Group dating back to 1997. All 28 articles included Professor Latchman in the authorship list, with as co-author on
- 3 Under the Initial Assessment stage of the procedure, the former UCL Registrar liaised with the at UCL to seek an expert academic opinion on the allegation to help determine whether the matter fell within the definition of misconduct in research under the procedure. was commissioned to take an initial scrutiny of the allegation and prepared a report on his findings to both the and the former Registrar. The current Registrar determined that the allegation fell within the scope of the procedure and that it proceed to the Screening Panel stage for consideration.
- 4 In accordance with the procedure, at least three senior members of UCL staff from the Department or Faculty concerned, nominated by the Registrar for approval by the Vice-Provost (Research), were appointed to serve as members of the Screening Panel. The membership of the Screening Panel was as follows:
- 5 According to the procedure, the Screening Panel's role was to:
 - review the allegation and supporting evidence submitted by the Complainant;

- review the evidence and supporting documentation from the Respondent, who should be given the opportunity to respond to the allegation, set out his/her case and present evidence;
 - review any background information relevant to the allegations; and
 - interview the Complainant, the Respondent, and other individuals who might provide relevant information to assist the Panel;
 - determine whether the allegation of misconduct in research:
 - i. was mistaken, frivolous, vexatious and/or malicious; or
 - ii. should be referred directly to UCL's relevant disciplinary process or other internal process; or
 - iii. had some substance but due to a lack of intent to deceive or due to its relatively minor nature, should be addressed through education and training or other non-disciplinary approach rather than through the next stage of the procedure or other formal proceedings; or
 - iv. was sufficiently serious and had sufficient substance to justify a Formal Investigation.
- 6 All members of the Screening Panel had in accordance with the procedure declared that they:
- would adhere to the principles of the procedure;
 - would abide by the procedure as it affects the work of the Screening Panel;
 - would work within the Terms of Reference for the Screening Panel (which were to consider the allegations set out at paragraph 2 above);
 - had declared any links to the research and/or the individuals involved in the allegations or any interests which might conflict with the principles of the procedure; and
 - would maintain the confidentiality of the proceedings throughout the work of the Panel and afterwards unless formally sanctioned by UCL or otherwise required to by law.
- 7 Meetings of the Screening Panel to consider the allegation and supporting evidence and documentation took place on 22 August 2014, 22 September 2014, 30 September 2014 and 17 November 2014. At the meeting held on 30 September 2014, the Screening Panel conducted separate interviews with the Respondents, Professor Latchman and (the latter was interviewed by Skype), and one other person in accordance with the procedure. The Panel also met with in person on 17 November 2014. The Complainant was contacted, via their email address, to confirm whether they wished to meet with the Panel in person; no response was received to this invitation.
- 8 Prior to the meetings above, all members of the Screening Panel had been sent the following documentation:
- a copy of UCL's *Procedure for Investigating and Resolving Allegations of Misconduct in Academic Research*;
 - copies of the emails sent by the Complainant dated 20 December 2013, 24 December 2013, 25 December 2013 and 27 December 2013;
 - copies of the 28 articles covered by the allegations;
 - a copy of the report prepared by ; and
 - individual statements in response to the allegations submitted by the Respondents.
- 9 Subsequent to its meeting held on 22 August 2014, the Panel sought written responses from a number of co-authors, where traceable, on some of the articles concerned in the allegations. All the written responses received were shared with

Professor Latchman, and only those that covered articles on which was named were shared with him.

- 10 Ahead of the interviews, both the Respondents and were supplied with a copy of an article titled 'What's in a picture? The temptation of image manipulation', by Mike Rossner and Kenneth Yamada *Journal of Cell Biology* (2004) 166:11-15 at the Panel's request. All parties were also informed of the individual articles that the Panel wished to discuss with them in detail at interview in advance.
- 11 At the start of each interview, all parties were supplied with a short document prepared by the Panel that set out some guiding principles about the ultimate responsibility for the integrity of the data in any paper resting with the senior author and the types of data misrepresentation drawn from the article above (Rossner and Yamada 2004).

Findings of the Screening Panel

- 12 Having considered the evidence at paragraphs 8 and 9 and interviewed the Respondents together with , the Screening Panel determined that some of the Figures within some of the articles covered by the allegations had indeed been fabricated.
- 13 In reaching its decision, the Screening Panel made the following findings in relation to the articles covered by the allegations:
 - 13a The Panel considered that the allegations made in respect of in this article had substance and that the article should be retracted. During the interview accepted that, given the original primary data from which he had prepared the Figures no longer existed, the paper needed to be retracted due to fabrication and duplication of bands for different experiments and
 - 13b The Panel considered that the allegations made in respect of had substance and that the article should be retracted. This was accepted by Professor Latchman during interview given that the original primary data concerned, from which the authors had prepared the Figures, no longer existed. Professor Latchman agreed the paper needed to be retracted due to fabrication and duplication of bands from different experiments.
 - 13c

This was accepted by Professor Latchman. However, the Panel was told during the interview that the Figure was prepared by one of the other authors. Professor Latchman was named as last author on this paper and therefore held ultimate responsibility for the data. The Panel considered that the allegations made on this article had substance and that it should be retracted. This was accepted by Professor Latchman during interview.

13d Subsequent to his interview with the Panel, Professor Latchman informed the Panel Secretary that collaborators had found the original data for Professor Latchman explained that this showed the work was repeated twice with the appropriate result for

according to Professor Latchman, that this error arose there rather than in his laboratory. The Panel considered that the original data did not alter its findings above and that the article be retracted.

13e The Panel discussed this paper in detail at interview with The Panel found that

The Panel considered that the allegations made on this article had substance and that it should be retracted due to fabrication and duplication of bands and controls for different experiments, and this was accepted by and Professor Latchman during interview given the original primary data concerned no longer existed that could have been used to confirm the Figures.

13f Professor Latchman accepted the two allegations made in respect of

The Panel considered that the allegations made on these articles had substance and that the articles should be retracted. This was accepted by Professor Latchman during interview given that the original primary data concerned, which could have been used to confirm the data presented in the Figures, no longer existed.

13g Subsequent to his interview with the Panel, Professor Latchman supplied the Panel Secretary with the original data that had been found for

The Panel considered that the original data did not alter its findings above that the article should be retracted.

- 13h The Panel briefly discussed the set of papers above with Professor Latchman who noted that it was common previous practice to
Professor Latchman said that researchers within his Lab were trained not to
- The Panel determined that there was no *prima facie* evidence of research misconduct in relation to these articles and that the allegations could not be pursued further.

- 13i The Panel found that the allegations made in respect of the above two articles had been raised separately by earlier this year. The journal had sought information from Professor Latchman and were satisfied with the response supplied and closed the case. The Panel determined that the allegations did not need to be pursued further.

13j

The Panel considered that the allegations made on this article had substance and that it should be retracted, rather than the individual Figure alone being corrected, since there were multiple errors and it was hard to justify to a journal that multiple errors in a Figure be corrected simply by way of a correction. The Panel indicated that it would be able to comment on any draft retraction statement.

13k

In summary, the Panel considered that this article should be retracted; this recommendation was accepted by [redacted] at interview. As above, the Panel indicated that they would be able to comment on any draft retraction statement.

he Panel subsequently noted that these articles have not been retracted.

- 13m The Panel noted that both the above articles were published back in and that the allegations made related to one Figure that was not cross referenced between both articles. Professor Latchman explained that he had tried to

Whilst Professor Latchman accepted the Panel's comment, he argued that while this might not be optimum practice he did not consider it to be bad practice. The Panel determined that the allegations lacked substance and did not need to be pursued further.

- 14 The Panel also considered the remaining allegations made by on the other 14 articles and determined that there was no clear-cut *prima facie* evidence of research misconduct that needed to be pursued further.

Response by the Respondents

- 15 During interview, Professor Latchman also made the following points in mitigation:

- Professor Latchman explained that he considered the tone of the emails sent by the Complainant to be vitriolic towards him personally and that he did not accept that he was a 'fraudster' as had been stated within one of the Complainant's emails.
- Professor Latchman noted that the number of articles covered by the allegations represented a small part of his total research output produced during his academic career to date (some 250 papers).
- Moreover, some of the articles that had been examined dated back to 1997 and it was likely that there had been some 25 breakthrough papers on the research concerned subsequently.
- It was noted that the data image technology and software now available was far more advanced than that available at the time that the older articles covered by the allegations were produced.
- Professor Latchman was made Head of Department of Molecular Pathology at UCL in 1991, and moved to ICH to become Director in 1999, and as part of that appointment he secured a lectureship post

Professor Latchman was keen to develop the research careers of his colleagues and started to use corresponding author status on work produced by He subsequently became last

author on their work so as not to hinder their academic development. However, Professor Latchman noted that still included his name on publications, although his role as last author was advisory given the work concerned was developed independently. Professor Latchman accepted that whilst it might be mistaken for him to continue to be named as last author, he did so to help in their applications for grant funding and promotion.

- Professor Latchman did not personally prepare any of the data in the articles covered by the allegations, nor did he directly supervise all researchers in his Lab.
- Professor Latchman remains as Head of the Medical Molecular Biology Unit at ICH, located at the Rayne Institute at UCL, as having Head status allowed him to sign off grant applications by researchers in his Lab. He was also line manager.

- 16 As indicated in written response and at interview, explained that no longer had any primary data prior to 2010. stated that this had significantly reduced storage space, and that some of the experiments were carried out by former researchers in the Group who had taken some of the data with them upon their departure to complete their part of the manuscript. was aware that primary data should be kept for 10 years in line with UCL policy and accepted that he should have kept the primary data for longer and would do so now onwards. Professor Latchman noted that he had spoken to in the past about keeping primary data, as this was an area of concern. added that had published over peer-reviewed manuscripts and accepted responsibility as senior author on those papers where errors had been found by the Panel. In fact, it was noted by the panel that (see paragraph 22 below). While stated would follow the Panel's recommendations, appeared unable to assess the clear duplication of the data in the papers at first interview, stating

Culture in the Latchman Group

- 17 The Panel was interested in the culture within the Latchman Group. It was noted that the Latchman Group consisted of about 20-25 persons in total that were divided into sub-groups of about 5-7 people. The Panel found that postdoctoral researchers were given projects and had regular fortnightly meetings with their respective supervisor to discuss progress on their work. Professor Latchman stated that he looked at every piece of primary data produced by the Lab and encouraged his researchers to start their articles with a primary data image as he considered that to be the best science practice to encourage both the researcher and reader to develop skills to look at primary data. In terms of the replication of experiments, researchers in the Lab were made aware that they must conduct a minimum of three replications.

Operation of the Procedure

- 18 The Panel considered that the report prepared by that was commissioned by the former UCL Registrar at the Initial Assessment phase of the procedure was extremely helpful. However, as confirmed in its interview with Professor Latchman, all Panel members had spent some considerable time and effort analysing each article and the figures therein covered by the allegations and had not relied on report in determining its consideration of the allegations. Moreover, the Panel had identified other errors outside those identified by both the Complainant and

- 19 The Panel also noted that it had found the Rossner and Yamada article very helpful in its consideration of this matter concerning data fabrication, and was of the view that the definitions of research misconduct contained in UCL's procedure at Annex 2 required revision and expansion.

Other findings

- 20 The Panel also noted Professor Latchman's request that any retraction make clear the Figure(s) that required correction in the article concerned so that any potential damage to the reputation of the co-authors could be limited.
- 21 During interview, Professor Latchman noted that he had been contacted by one of the authors contacted by the Panel for information who was distressed by the matter. The Panel confirmed that, given the seriousness of this matter, authors on papers that were not recommended for retraction would be informed by the Panel Secretary that the allegations would not be taken further to allay their concerns.
- 22 The Panel also found that
editorial team included Professor Latchman and other co-authors of the papers in question including . Moreover, all published articles together in the journal.
- 23 The Panel noted that this might be just the tip of the iceberg, since much of the data in the papers senior authored by and co-authors was not presented in primary form, preventing an assessment of its validity. Moreover, it was noted that while there were no other clear indications of fraud in the other papers covered by the allegations that were not recommended for retraction, the work in many of those papers from the team was deemed to be very sloppy and the conclusions of papers were not always supported by the data presented.

Conclusions

- 24 While the Screening Panel noted that it was not its role to determine whether the allegation against the Respondents was proven or unproven, it was nevertheless able to conclude on the basis of evidence presented to it that *prima facie* evidence of misconduct in research of fraud as defined within Annex 2 of the procedure as 'deliberate deception (which may include the invention or fabrication of data) or other misuse of research funds or research equipment' had occurred in relation to eight of the articles covered by the allegations. In light of the seriousness of the matter, the Panel considered that the matter should be referred directly to UCL's relevant disciplinary process or other internal process and bypass the Formal Investigation stage given the Respondents had accepted at interview that the articles be retracted.
- 25 The Panel would emphasise that it considers that a paper is only as good as the data in it. Therefore statements to the effect the data were in error, but the overall message of the paper was still OK, are not acceptable. If a single Figure in a paper can be shown, beyond reasonable doubt, to have been manipulated, the Panel recommends retraction rather than correction since the conclusions cannot be deemed to be supported by the data. The Panel would also advise that retraction was an honourable action to take, rather than being shameful. However, any retraction statement should be carefully worded to explain the precise reason for retraction.

Recommendations

- 26 The Screening Panel makes the following recommendations in light of its review of the allegations:

- 26.1 The Panel considers that there was *prima facie* evidence of research misconduct in some of the allegations of fraud, in relation to data fabrication.
- 26.2 The Panel found that there was *prima facie* evidence of research misconduct in relation to eight of the articles included in the allegations. The Panel noted that the Respondents, accepted at interview that the articles concerned be retracted immediately. Therefore, the Panel recommends that the following articles be retracted by the respective senior author:
- 26.3 That once the retractions for the above articles have been lodged, the respective senior author inform the grant funding bodies thanked in the articles concerned about the *prima facie* evidence of research misconduct.
- 26.4 That given Professor Latchman's very senior position as Master of Birkbeck, and the likely press interest arising from the retractions of the above articles on which he is named, the Panel would advise Professor Latchman to update the Chair of the Board of Governors at Birkbeck about this matter.
- 26.5 The Panel recognises that Professor Latchman is a senior, distinguished scientist but considers that UCL and the Director of ICH should refer the matter directly to UCL's relevant disciplinary process or other internal process.
- 26.6 The Panel notes both paragraph C44 and paragraph 5 at Annex 6, titled 'Actions and outcomes' in the procedure and recommends the following:
- In light of the Panel's findings, the should discuss with the whether Professor

Latchman's Group within the Medical Microbiology Unit be part of UCL's or ICH's organisational structure, and that, once confirmed, ensure that both the Unit and its staff have clear reporting lines.

- The Panel found that all the articles that had *prima facie* evidence of research misconduct supporting the allegations of fraud were produced by the [REDACTED] In light of the Panel's findings, the [REDACTED] and [REDACTED] are invited to consider the appropriateness of his supervision of research students and whether it is appropriate that he be allowed to publish papers and write grant proposals.
- That [REDACTED] consider the appropriateness of serving as [REDACTED] given the Panel's findings above
- That the UCL Registrar forward a copy of this report to the [REDACTED], for both [REDACTED] and [REDACTED], for information, and that the matter be covered in their individual annual staff appraisal.

Concluding remarks

- 27 The Chair expressed thanks to all members of the Screening Panel for their help in this matter.

March 2015

Allegation of research misconduct in respect of 32 papers published between 1990 and 2013 by researchers based at the UCL Institute of Child Health

Report of the Investigation Panel

- 1 In 2015 a series of allegations of misconduct in research, consisting of comments and annotated images submitted to the *PubPeer* website¹, was forwarded to the UCL Registrar (Wendy Appleby), the Named Person under UCL's Procedure for Investigating and Resolving Allegations of Misconduct in Academic Research ('the Procedure' hereafter), by a party acting under the name [REDACTED], which was assumed to be a pseudonym. The allegations related to 32 publications published by researchers based at the UCL Institute of Child Health over the period 1990–2013.
- 2 The Procedure states that: 'UCL... reserves the right to investigate any allegations, or suspicions, of misconduct in research that have been made available in the public domain or otherwise made known to UCL, but where there is no specific Complainant. Such cases will be considered only at the discretion of the Registrar' (C6)².
- 3 The Registrar exercised her discretion in relation to the allegations, and decided to instigate the Procedure with no specific Complainant, in line with the provisions of the Procedure. Under the Initial Assessment stage of the Procedure (C9), the Registrar determined that the allegation fell within the scope of the Procedure, and that it should proceed to a Screening Panel for consideration.
- 4 The Respondents in the case at that time were Professor David Latchman and [REDACTED]. Professor Latchman had been head of the unit throughout the period in which the publications had been produced; the other respondents listed in paragraph 7 were based in the unit during this period. He was Dean of the Institute of Child Health (ICH) from 1999 to 2002, moving to the role of Master of Birkbeck, University of London on 1st January 2003. At the time of the receipt of the allegations, Professor Latchman held (and continues to hold) a 0.1FTE appointment at the ICH alongside his position at Birkbeck.

¹ <https://pubpeer.com/>

² References to the Procedure refer to the version (dated March 2014) in place at the time of the allegation (October 2015). The Procedure is available at <https://www.ucl.ac.uk/srs/governance-and-committees/resgov/research-misconduct-procedure.pdf>

Screening Panel

- 5 A Screening Panel considered the allegations during 2016 and produced a report in October of that year. The conclusion and recommendations of the screening panel were as follows:

Conclusion

Having considered the evidence and interviewed the Respondents, the Screening Panel determined (a) that there is clear evidence that some of the figures within some of the articles covered by the allegations have been fabricated; (b) that such fabrications are highly unlikely to have occurred by accident, given the nature of the manipulations, the extended time period over which they have taken place and the number of such manipulations that had been uncovered; and (c) that at least in some cases the apparent fabrication of these figures had been fundamental to, rather than incidental to, the conclusions reached in the publications concerned. In the panel's view the evidence clearly indicates that the researchers in the laboratory had developed a culture outside the accepted standards of research integrity. The panel felt that it was not in a position to assess the extent of responsibility of each individual Respondent or of any other of the authors, but noted that such activities appeared to have been taking place over an extended period of time and, based on the authorship lists, to involve more than one individual.

While the Screening Panel noted that it was not its role to determine whether the allegation against the Respondents was proven or unproven, it was nevertheless satisfied that there is *prima facie* evidence of misconduct in research as defined within Annex 2 of the procedure, and that this is sufficiently serious and of sufficient substance to justify a Formal Investigation to determine whether such misconduct has indeed taken place, and if so who was responsible.

Recommendation

That a Formal Investigation be established to review the allegations.

In reaching these conclusions, the Screening Panel further noted as follows:

Having reviewed the evidence available, the Screening Panel determined that it was not possible to judge which members of the laboratory had actually performed each of the manipulations of images outlined in the examples at Paragraph 11 above. The panel therefore takes the view that a Formal Investigation is necessary in order to determine where responsibility lies for any manipulation of images, and for the publication of papers containing such manipulated images. The panel regards it as essential however that such an Investigation be tasked with considering the role of a wider group of individuals than the two respondents named in this case – namely:

as well as Professor Latchman and

Noting that the Procedure entitled it to 'set out in its final report any other salient issues relating to those allegations that it concludes should be considered by the Investigation Panel as part of the Formal Investigation stage of the Procedure' [Annex 4(19)], the Screening Panel advises the Investigation Panel to consider
by way of
evidence.

Prior to the finalisation of the Screening Panel report, Mr Rex Knight, Vice-Provost (Operations), became the Named Person for the purposes of the Procedure.

Formal Investigation

- 6 In accordance with the Procedure, a formal Investigation Panel was established in May 2017. The membership of the Panel was as follows:
- 7 As recommended by the report of the Screening Panel, the list of respondents at the Formal Investigation stage was expanded to:
and
- 8 The Investigation Panel carried out its work in 2017, and held a Hearing on 2 October 2017 (in accordance with the Procedure) at which all of the Respondents were separately interviewed.
- 9 The Investigation Panel also considered the following documentation:
- a copy of UCL's *Procedure for Investigating and Resolving Allegations of Misconduct in Academic Research* dated March 2014;
 - the allegations;
 - the report of the Screening Panel;
 - written submissions on the allegations from each of the Respondents, including supporting evidence;
 - Copies of the 32 publications covered by the allegation;
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Review of allegations – Papers

- 10 The Investigation Panel first considered each of the papers cited in the allegations to determine whether, on the balance of probabilities, misconduct in research (as defined in the Procedure) had occurred. Its conclusions are set out below. Where appropriate, the Panel members referred to the original HTMLs in order to satisfy themselves that they were able to verify the alleged manipulations.
- 11 Papers not requiring further detailed investigation or discussion with Respondents

Having reviewed the allegations and the evidence available, the Panel took the view that, in the case of the following 22 papers, misconduct in research had not occurred and no further detailed investigation or discussion with the Respondents was required. This was either because the allegation was mistaken or unclear; because there was no evidence to support the assertion of misconduct; or because the allegation could not be addressed without access to original data, which were no longer available. A brief summary of the Panel's views on these papers is given below.

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While the treatment of the image in [REDACTED] appeared to involve splicing and may not have reflected best practice, the Panel did not consider that there had been any attempt at obfuscation in respect of the manner in which it had been generated.

- The Panel did not regard the allegation regarding the paper to have substance. While the treatment of the images may not have reflected best practice, it did not amount to misconduct in research. The interpretation of the time courses was unexceptionable.
- The allegations concerning related to the manner in which the were handled at the time; that could not now be established with any certainty.
- The Investigation Panel concluded that the issue identified in the allegation concerning duplication of could not be satisfactorily addressed without access to the original data. The two features cited did look very similar, but there was insufficient evidence to conclude that misconduct in research had occurred.
- The Investigation Panel was not convinced that the allegation in respect of of this paper had substance.
- The Investigation Panel considered that the re-use of much of a previously published diagram in the data summary diagram in was appropriate, innocuous and correctly cited in the figure legend.
- The nature of the allegation in respect of of this paper was unclear to the Investigation Panel, although it appeared to relate to the possible and did not appear to affect the conclusion of the paper. The Panel did not identify any evidence of misconduct in research.
- The Investigation Panel acknowledged that the bands in identified in the allegation appeared to be similar, but took the view that there was insufficient evidence of misconduct in research as alleged.
- The Investigation Panel was unconvinced by the allegation relating to which lacked detail.
- The Investigation Panel was not convinced by the allegation relating to do not look like they come from the same that 'the

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The Investigation Panel considered that there was insufficient evidence to support the allegation in relation to this paper. It was incorrect to say that there were no readily observable data.

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The Investigation Panel considered that there was insufficient evidence to support the allegation in relation to this paper. It was incorrect to say that there were no readily observable data.

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The nature of the allegation was unclear. The paper had a clearly as part of and there was no attempt to disguise the fact.

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The Investigation Panel examined the allegation, which related to
The Panel took the view that the splicing was obvious in this case and was common practice at the time.

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The allegation appeared to relate to possible although the allegation was not completely clear. The Investigation Panel took the view that it would not be possible to reach a reliable conclusion on the allegation without access to the original (which was not available).

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The Investigation Panel did not regard the allegation of of this paper as having substance. The manner in which the image had been generated was clear to the reader, with no attempt to disguise the fact.

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The Investigation Panel was not convinced of the force of the allegation in respect of this paper, noting that it was somewhat tortuous in nature and difficult to sustain on account of the low resolution of the image. The Panel noted that the

The Panel also noted that the journal had corresponded with and Professor Latchman with respect to this allegation and at the completion of the correspondence had stated: "We are satisfied with your response and the evidence provided and agree that the figures have not been unethically duplicated. We now consider this case closed."

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This allegation consisted of a composite block with an arrow indicating a space between This suggested which at the time was common practice. On that basis the allegation was not upheld. The Panel also noted that had corresponded with the journal over this allegation. had

explained that the primary data had been lost and the Journal editor had replied, "On this occasion we are happy to accept that you are unable to supply the underlining data for the due to loss of the original images. We do agree that it would have been desirable that this data was stored for a longer period and not lost or destroyed in your move."

In was indicated in the allegation by an arrow. The Panel did not consider there to be any evidence of misconduct in respect of this paper.

The allegation indicated issues with the although the nature of the allegation was not completely clear. The Investigation Panel found that there was insufficient evidence to support the allegation.

The allegation referred to repetitive features in the re-use of from one in an earlier publication and re-use of from an earlier paper. The Investigation Panel considered there was insufficient evidence of fabrication or falsification to support the allegation.

The allegation was not entirely clear but appeared to refer to the obvious The Investigation Panel found that there was no evidence of misconduct in respect of this paper.

12 Papers requiring further detailed investigation and discussion with Respondents where the Panel concluded there was no evidence of misconduct in research

Having reviewed the allegations and the evidence available, the Panel took the view that, in the case of the papers below, further detailed investigation and discussion with the relevant Respondents was required. However in light of that further investigation and discussion, the Panel concluded that, in respect of these papers, misconduct in research had not occurred. A summary of the Panel's views on these papers is given below.

The allegation was that the image of the at the had been flipped and re-used

The Panel understood that referees had asked the authors to include characterisation of the did indeed reference the earlier paper, although in the view of the Panel this could usefully have been included in the legend for the figure itself. Nevertheless this was a relatively trivial matter and did not constitute misconduct in research.

The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

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The Panel noted that this error was regrettable, and reflected a degree of lack of awareness or failure to notice mistakes on the part of the author. However in the view of the Panel, these actions did not amount to misconduct in research.

The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

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The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

13 Papers requiring further detailed investigation and discussion with Respondents where the Panel concluded that misconduct in research had occurred

Having reviewed the allegations and the evidence available, the Panel took the view that, in the case of the papers below, further detailed investigation and discussion with the relevant Respondents was required.

The Panel concluded that, in respect of these papers, misconduct in research had occurred. A summary of the Panel's views on these papers is given below. The Panel also considers the responsibility of individual Respondents in respect of this misconduct in paragraph 18 onwards below.

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The Panel considered that there was clear evidence in this paper of cloning; that is, copying of parts of the image and pasting the copied part elsewhere in the same image. The panel further considered that the re-use of an image from a paper years previously was extremely unlikely to have occurred by accident.

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

In the view of the Panel it was clear that the image had been intentionally manipulated.

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

In the view of the Panel it was clear that the images had been intentionally manipulated.

The Panel noted that a draft of this paper with the same figures was included in with and DS Latchman listed as authors

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

In the view of the Panel it was clear that the images had been intentionally manipulated as alleged.

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

The Panel concluded that this allegation had substance: on the balance of probabilities the manipulations had been intentional (rather than having occurred through carelessness or otherwise).

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

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In the view of the Panel it was clear that such manipulation had indeed occurred.

The Panel did not accept the explanation offered by

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

In the view of the Investigation Panel this allegation was clearly substantiated by the evidence.

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

- 14 The nature of the research misconduct identified by the Panel in paragraph 13 is that of fraud (as defined in Annex 2, paragraph 7 of the Procedure).

Further comments on the nature of the allegations and the Panel's findings

- 15 The Investigation Panel did not (and was not required to) carry out an exhaustive review of every paper published by one or more of the Respondents during the period concerned. Investigations were focussed on those papers cited in the allegations.

- 16 In the publications considered by the Panel, three main categories of problem were identified:

- i) Splicing of images of western blots, i.e. combining individual tracks from the gel electrophoresis image from different western blots into the same image;
- ii) Reuse of images of western blots and micrographs;
- iii) Duplication or "cloning" of segment of micrographs both within and between individual images.

Against the background of the guidance in the Procedure that '...the standards by which allegations of misconduct in research should be judged should be those prevailing in the country in question and at the date that the behaviour under investigation took place' [Annex 2, para. 7], the panel concluded that the first category, i.e. splicing of western blot images, was not uncommon practice at the time of the publication of these articles, and was not then regarded as unsatisfactory, although it was not considered best practice. The Panel therefore decided that the splicing of images of western blots did not amount to misconduct in research.

The second category, i.e. re-use of images of western blots and micrographs, could not be viewed in the same way. While the Panel considered that an occasional instance of such re-use might arise through simple error, for example by mislabelling an electronic file, there were numerous instances of the re-use of such images, and in view of this the Panel concluded that, on the balance of probabilities, in the instances identified above these manipulations had been carried out intentionally, and accordingly amounted to misconduct in research.

- 17 The third category of problem, i.e. the manipulation of individual images, was regarded by the Panel as the most serious category of research misconduct. This could not have arisen by accident. There were numerous instances of image manipulation identified by the Panel, for example, cloning of parts of the image was found in the following micrographs:

Review of Allegations – the Respondents

- 18 Having considered the allegations in the context of the papers identified above, the Panel also considered whether, and if so, to what extent, any Respondent was responsible for the misconduct in research identified, and accordingly whether (on the balance of probabilities) any allegation of misconduct in research is upheld in respect of that Respondent. Each of the Respondents is considered in turn below.
- 19 In determining allegations of misconduct in research in respect of each Respondent, the Panel acted in accordance with the provisions of the Procedure. As such, the Panel had regard, inter alia, to the following provisions of Annex 2:

[1]... Although allegations of misconduct in research are often raised as departures from accepted procedures in the conduct of research, investigations should aim to establish intentional and/or reckless behaviour as set out in the definition of misconduct in research (Para 7 below).

[7]...The basis for reaching a conclusion that an individual is responsible for misconduct in research relies on a judgement that there was an intention to commit the misconduct and/or recklessness in the conduct of any aspect of a research project...

In interpreting these paragraphs, the Panel had regard to the OED definition of 'reckless', which is defined (inter alia) as 'Heedless of or indifferent to the consequences of one's actions'; 'Careless in executing a task, duty, etc.; inattentive, lacking in diligence.'

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The allegations of misconduct in research in respect of
upheld. are not

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The allegations of misconduct in research in respect of are not upheld.

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The allegations of research misconduct in respect of are upheld.

23

The allegations of research misconduct in respect of are upheld.

24 Professor David Latchman was head of the unit throughout the period in which the publications in question had been produced. He was also, from 1 January 2003, Master of Birkbeck, University of London. From that point his active engagement with the laboratory decreased over time, although he continued to hold a 0.1FTE appointment at the ICH. He

was an author on all seven of the papers where the Panel found that misconduct in research had occurred.

The Panel did not consider that Professor Latchman had any intention to commit misconduct in research, or that he had any knowledge of the misconduct in research identified in the Investigation at the time. The Panel noted that the referees of the publications, and the readers of

had not identified any problems at the time.

In discussions with the Panel, Professor Latchman volunteered information consistent with him having been insufficiently attentive in the management of the laboratory; he explained that this had occurred because the group leaders had become more independent over time as they secured their own research grants.

The Panel concluded that Professor Latchman had been insufficiently attentive in the management of the laboratory and in respect of the group's publications. His inattentiveness to the detail of the research going on in the laboratory over a number of years, and to its reporting in the papers published, had allowed the research misconduct by others to continue. The Panel concluded that, although he had no intention to commit research misconduct, his failure to manage the laboratory appropriately, together with his involvement as senior author or co-author on the publications where misconduct was identified, amounted to recklessness in the conduct of an aspect of a research project, which facilitated the misconduct in research identified in this Investigation.

The allegations of research misconduct in respect of Professor Latchman are upheld – in that whilst he did not intentionally commit the misconduct in research identified in this Investigation, his recklessness in the conduct of his laboratory and his involvement as author on many publications facilitated that misconduct.

RECOMMENDATIONS

- 25 Where allegations have been made against Respondents who are not currently employed by UCL, the Panel encourages UCL to notify the current employer of such Respondents of the outcome of this Investigation.
- 26 Of the Respondents where findings of research misconduct have been made, Professor Latchman is the only Respondent who currently holds an appointment with UCL (as far as the Panel is aware). UCL should consider whether to refer the findings of the Formal Investigation in respect of the allegations against Professor Latchman to its disciplinary processes.
- 27 The Procedure (Annex 6, paragraph 5) states that 'Following the conclusion of the Procedure, the Investigation Panel may need to recommend additional measures in addition to those that may be taken by way of UCL's disciplinary processes. Examples of potential actions that UCL may consider include: retraction/correction of articles in journals...' The Panel recommends that UCL should ask the authors and editors of the papers described in paragraph 13 to correct the record of research where misconduct has been identified.
- 28 The Panel considered that the findings of this Formal Investigation highlight the risks in allowing senior staff to run very large research groups alongside the burden of considerable responsibilities elsewhere; UCL is therefore invited to reconsider its arrangements in this respect.

The Panel was aware of UCL's Code of Conduct for research³ but considered that there would be benefit in clarifying to staff the criteria for authorship; in the case of those publishing

³ <http://www.ucl.ac.uk/srs/governance-and-committees/resgov/code-of-conduct-research>

work in biomedicine, reference could usefully be made to the recommendations of the International Committee of Medical Journal Editors (ICMJE)⁴. The ICMJE recommends:

...that authorship be based on the following 4 criteria: 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND 2. Drafting the work or revising it critically for important intellectual content; AND 3. Final approval of the version to be published; AND 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.

- 29 The Chair wishes to record his thanks to the members of the Investigation Panel for their contribution to the process.

⁴ <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

**Allegation of research misconduct in respect of seven papers
published by researchers based at the UCL Institute of Child Health
between 2002 and 2008**

Report of the Investigation Panel

- 1 In 2016 the Registrar of UCL received an allegation of misconduct in research, specifically in relation to data fabrication, falsification, manipulation and plagiarism. The allegation was made by ('the Complainant') against ('the Respondent'). The allegation arose in connection with seven articles that included amongst the authors and which had been published, and/or the work carried out, while he had been employed as at the UCL Institute of Child Health
- 2 Under the Initial Assessment stage of UCL's Procedure¹ for Investigating and Resolving Allegations of Misconduct in Academic Research ('the Procedure' hereafter), the Registrar determined that the allegation fell within the scope of the Procedure, and that it should proceed to a Screening Panel for consideration.
- 3 The Screening Panel considered the allegations and produced a report in November 2016. The report made a number of detailed observations in respect of each of the papers identified in the allegation, and made the following recommendation:

Recommendation

Having considered the evidence available and interviewed the Complainant and Respondent, the Screening Panel determined that it was not in a position to assess the extent of responsibility of the Respondent in relation to the allegations. While the Screening Panel noted that it was not its role to determine whether the allegation against the Respondent was proven or unproven, it was nevertheless able to conclude on the basis of evidence presented to it that there was *prima facie* evidence of misconduct as defined within Annex 2 of the procedure. This was sufficiently serious and of sufficient substance to justify a Formal Investigation to determine whether research misconduct had taken place. The Panel also considered it essential that the Formal Investigation Panel consider the roles of the other authors named in the articles to determine where responsibility for any research misconduct might lie.

- 4 Prior to the finalisation of the Screening Panel report, Mr Rex Knight, Vice-Provost (Operations), became the Named Person for the purposes of the Procedure.

¹ References to the Procedure refer to the version (dated March 2014) in place at the time of the allegation, at <https://www.ucl.ac.uk/srs/governance-and-committees/resgov/research-misconduct-procedure.pdf>

Formal Investigation

- 5 In accordance with the Procedure, a formal Investigation Panel was established in May 2017. The membership of the Panel was as follows:
- 6 Following further correspondence with the Chair of the Screening Panel, the phrase 'that the Formal Investigation Panel consider the roles of the other authors named in the articles to determine where responsibility for any research misconduct might lie' was determined by the Panel to mean that the first and last authors of the papers concerned would be treated as Respondents in the matter, where their employment history permitted this to happen according to the remit of the Procedure as set out at paragraph A9, and that middle authors be invited, where they could be located, to act as 'witnesses'. The list of respondents at the Investigation Stage was therefore expanded to: Professor David Latchman;
- 7 The Panel was not independently able to trace and contact
- 8 The Investigation Panel carried out its work in 2017, and held a formal Hearing on 2 October 2017 (in accordance with the Procedure), at which the following Respondents were interviewed: Professor David Latchman;
- 9 The Investigation Panel also considered the following documentation:
- a copy of UCL's *Procedure for Investigating and Resolving Allegations of Misconduct in Academic Research* dated March 2014;
 - the allegations;
 - the report of the Screening Panel;
 - copies of the publications cited in the allegation;
 - written submissions on the allegations from Professor Latchman,
 - Witness statements from the following 'middle authors' of the papers:

The complainant was invited to submit any further evidence to the Investigation Panel, but chose not to do so.

Review of allegations – Papers

- 10 The Investigation Panel first considered each of the papers cited in the allegations, to determine whether, on the balance of probabilities, misconduct in research had occurred. Its conclusions are set out below. Where appropriate, the Panel members referred to the original HTMLs in order to satisfy themselves that they were able to verify the alleged manipulations.
- 11 Papers where the Panel concluded that misconduct in research had not occurred

Having reviewed the allegations and the evidence available, the Panel took the view that, in the case of the papers below, further detailed investigation and discussion with the relevant

Respondents was required. However in light of that further investigation and discussion, the Panel concluded that, in respect of these papers, misconduct in research had not occurred. A summary of the Panel's views on these papers is given below.

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The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

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The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

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The Panel concluded that, in respect of this paper, misconduct in research had not occurred.

12 Papers where the Panel concluded that misconduct in research had occurred

Having reviewed the allegations and the evidence available, the Panel took the view that, in the case of the papers below, further detailed investigation and discussion with the relevant Respondents was required.

The Panel concluded that, in respect of these papers, misconduct in research had occurred. A summary of the Panel's views on these papers is given below. The Panel also considers

the responsibility of individual Respondents in respect of this misconduct in paragraph [15] onwards below.

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and

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

The Panel concluded that, in respect of this paper, misconduct in research had occurred.

- 13 The nature of the research misconduct identified by the Panel in respect of the papers referred to at paragraph [12] is that of fraud (as defined in Annex 2, paragraph 7 of the Procedure).

Further comments on the nature of the allegations and the Panel's findings

- 14 In the publications considered by the Panel, a problem clearly identified was the re-use of images of western blots and micrographs. Against the background of the guidance in the Procedure that '...the standards by which allegations of misconduct in research should be judged should be those prevailing in the country in question and at the date that the behaviour under investigation took place' [Annex 2, para. 7], the Panel concluded that the re-use of images of western blots and micrographs fell short of acceptable standards. While the Panel considered that an occasional instance of re-use might arise through simple error, for example by mislabelling an electronic file, they concluded that in the instances identified above it had been carried out intentionally, and accordingly amounted to misconduct in research.

Review of Allegations – the Respondents

- 15 Having considered the allegations in the context of the papers identified above, the Panel has also considered whether, and if so, to what extent, any Respondent was responsible for the misconduct in research identified, and accordingly whether (on the balance of probabilities) any allegation of misconduct in research is upheld in respect of that Respondent. Each of the Respondents is considered in turn below.
- 16 In determining allegations of misconduct in research in respect of each Respondent, the Panel acted in accordance with the provisions of the Procedure. As such, the Panel had regard, *inter alia*, to the following provisions of Annex 2:

[1]... Although allegations of misconduct in research are often raised as departures from accepted procedures in the conduct of research, investigations should aim to establish intentional and/or reckless behaviour as set out in the definition of misconduct in research (Para 7 below).

[7]...The basis for reaching a conclusion that an individual is responsible for misconduct in research relies on a judgement that there was an intention to commit the misconduct and/or recklessness in the conduct of any aspect of a research project...

In interpreting these sections, the Panel had regard to the OED definition of 'reckless', which is defined (*inter alia*) as 'Heedless of or indifferent to the consequences of one's actions'; 'Careless in executing a task, duty, etc.; inattentive, lacking in diligence.'

The allegations of misconduct in research in respect of are not upheld.

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19 The allegations of misconduct in research in respect of are not upheld.

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21 The allegations of misconduct in research in respect of are not upheld.

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23 The allegations of misconduct in research are not upheld.

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25 As could not be independently traced and asked to take part in the Investigation, the Panel does not provide any formal conclusions in relation to the allegations against

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The allegations of misconduct in research in respect of are upheld.

The allegation of misconduct in research in respect of upheld.

- 28 Professor David Latchman was head of the unit throughout the period in which the publications in question had been produced. He was also, from 1 January 2003, Master of Birkbeck, University of London. From that point his active engagement with the laboratory decreased over time, although he continued to hold a 0.1FTE appointment at the ICH and remained head of the unit. He was an author on all three of the papers where the Panel found that misconduct in research had occurred.

The Panel did not consider that Professor Latchman had any intention to commit misconduct in research, or that he had any knowledge of the misconduct in research identified in the Investigation at the time. The Panel noted that the referees of the publications had not identified any problems at the time.

In discussions with the Panel, Professor Latchman volunteered information consistent with him having been insufficiently attentive in the management of the laboratory; he explained that this had occurred because the group leaders had become more independent over time as they secured their own research grants. In retrospect, Professor Latchman also recognised that he should not have allowed his name to continue to be included as an author on some of the papers.

The Panel concluded that Professor Latchman had been insufficiently attentive in the management of the laboratory, and in respect of the group's publications. His inattentiveness to the detail of the research going on in the laboratory over a number of years, and to its reporting in the papers published, had allowed the research misconduct by others to continue. The Panel concluded that, although he had no intention to commit research misconduct, his failure to manage the laboratory appropriately, together with his involvement as senior author or co-author on the publications where misconduct was identified, amounted to recklessness in the conduct of an aspect of a research project, which facilitated the misconduct in research identified in this Investigation.

The allegations of research misconduct in respect of Professor Latchman are upheld – in that whilst he did not intentionally commit the misconduct in research identified in this Investigation, his recklessness in the conduct of his laboratory and his involvement as author on many publications facilitated that misconduct.

The Panel wishes to note that it did not consider the role of Professor Latchman in relation to given the consideration of his involvement with this paper in an earlier, separate Procedure. It is noted that the Panel in the current Investigation did not in any case uphold the allegation of research misconduct in respect of this paper.

RECOMMENDATIONS

- 29 Where allegations have been made against Respondents who are not currently employed by UCL, the Panel encourages UCL to notify the current employer of such Respondents of the outcome of this Investigation.
- 30 Of the Respondents where findings of research misconduct have been made, Professor Latchman is the only Respondent who currently holds an appointment with UCL (as far as the Panel is aware). UCL should consider whether to refer the findings of the Formal Investigation in respect of the allegations against Professor Latchman to its disciplinary processes.
- 31 The Procedure (Annex 6, paragraph 5) states that 'Following the conclusion of the Procedure, the Investigation Panel may need to recommend additional measures in addition to those that may be taken by way of UCL's disciplinary processes. Examples of potential actions that UCL may consider include: retraction/correction of articles in journals...' The Panel recommends that UCL should ask the authors and editors of the following papers to consider the case for correction of the scientific record:
- 32 The Chair wishes to record his thanks to the members of the Investigation Panel for their contribution to the process.